

**STD32****PC/AT®**

# ZT EK01/EK02

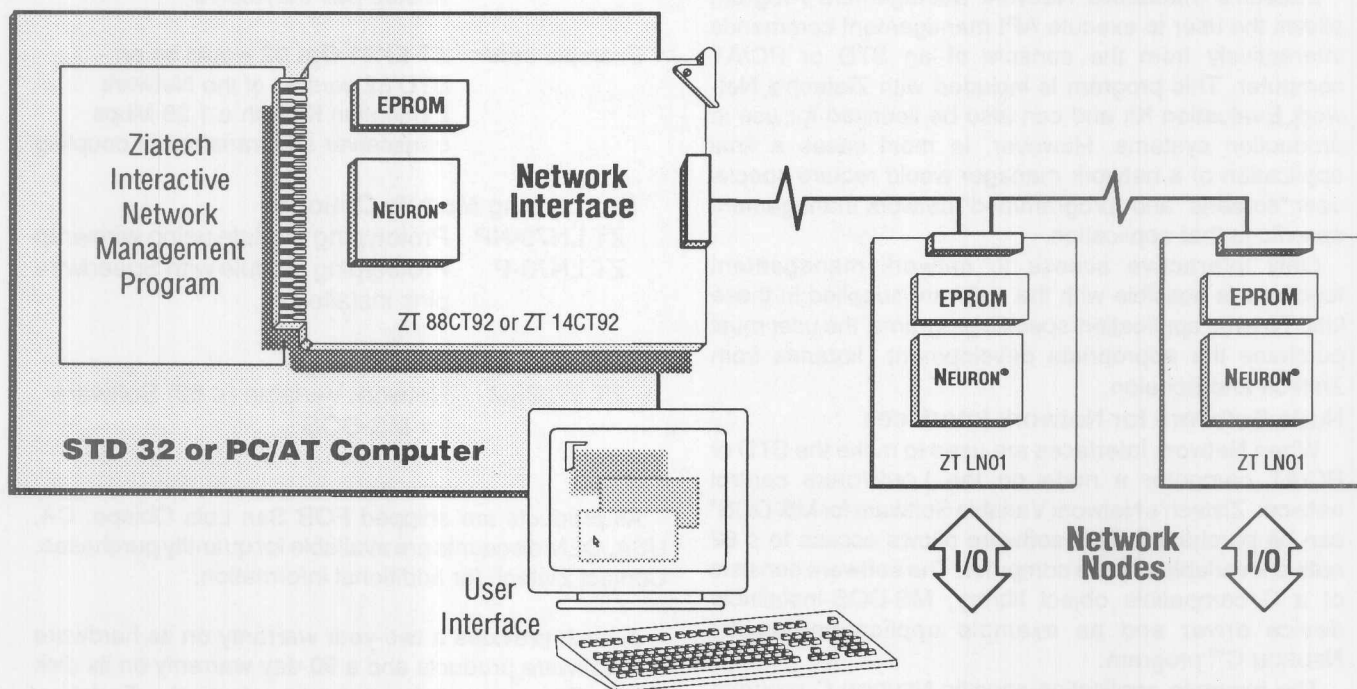
## Network Evaluation Kits

### A collection of system components for evaluating and prototyping LONWORKS™ control networks

The ZT EK01 and ZT EK02 Network Evaluation Kits provide prospective purchasers and prototypers of LONWORKS control networks the ability to evaluate network operation and management. The kits allow the user to configure the host STD 32 or PC/AT system as a LONWORKS network manager. This configuration allows interactive access to all of the management functions facilitated by Echelon's Application Program Interface (API); functions include downloading programs, querying and changing network variables, and modifying communication parameters.

In addition to the Network Interface and software, two general purpose, NEURON-based Network Nodes

are included to provide node interaction. These nodes can also be used as prototype platforms for application-specific developments. Prototyping is simplified with optional breadboard I/O modules which can be stacked for custom I/O prototyping. All the necessary cables and documentation are provided in the evaluation kit. It is important to note that this is an interactive screen and keyboard-facilitated product. To access these network management functions from user-written programs, the user must have an Echelon LONBUILDER Developer's Workbench and library versions of the Ziatech and Echelon programs employed in the kit.



- Windowed displays for ease of use
- Interactive access to all Echelon API functions
- System management tool for LONWORKS control networks
- Compatible with LONBUILDER™ Developer's Workbench products

- Useful demonstration of LONWORKS technology
- Components can be used in prototyping LONWORKS-based products
- Two-year warranty

**Preliminary Data Sheet****ZIATECH**  
CORPORATION

## Functional Considerations

### Network Interfaces

The ZT EK01 (STD 32 Bus) kit contains the ZT 88CT92 Network Interface (with a resident Microprocessor Interface Program), Network Interface Driver, Interactive Network Management Program, and two ZT LN01 Network Nodes. The ZT EK02 (PC/AT Bus) kit is identical except for the Network Interface card format.

### Network Nodes

Each Network Node is housed in an enclosure and provides access to all NEURON I/O pins for prototyping. Cables are provided to connect the two Network Nodes to the Network Interface and to provide power.

The ZT LN01 Network Nodes are powered by +12V supplied through the cable by the Network Interface. If either of the transformer-coupled transceiver options are ordered, Network Node power over the cable is isolated through the use of DC/DC convertors on each node.

Flexible prototyping is facilitated through the addition of stackable I/O modules for user-built I/O using wirewrap (ZT LN70-NP) or Speedwire™ (ZT LN70-P) techniques. See the ZT LN01 Network Node data sheet for more information on these modules.

### Management Software for Network Interfaces

Ziatech's Interactive Network Management Program allows the user to execute API management commands interactively from the console of an STD or PC/AT computer. This program is included with Ziatech's Network Evaluation Kit and can also be licensed for use in production systems. However, in most cases a final application of a network manager would require special user "screens" and "programmed" network management specific to that application.

Only interactive access to network management functions is possible with the software supplied in these kits. To write application-specific programs, the user must purchase the appropriate development libraries from Ziatech and Echelon.

### Node Software for Network Interfaces

When Network Interfaces are used to make the STD or PC/AT computer a node on the LONWORKS control network, Ziatech's Network Variable Software for MS-DOS® can be purchased. This software allows access to ≤ 62 network variables by the computer. The software consists of a C compatible object library, MS-DOS-installable device driver and an example application-specific NEURON C™ program.

The example application-specific NEURON C program would typically be replaced with an application-specific NEURON C program for the NEURON chip on-board the Ziatech Network Interface. This program will provide the node's "network personality," that is, how it interacts with other nodes on the network.

If more than 62 but less than 255 network variables must be motivated, then the Management Software for Network Interfaces described above may be utilized.

## Ordering Information

Network Evaluation Kits contain the following:

- Network Interface (STD 32 or PC/AT)
  - **ZT EK01** (for STD 32)  
*includes the ZT 88CT92 Network Interface*
  - **ZT EK02** (for PC/AT)  
*includes the ZT 14CT92 Network Interface*
- Interactive Network Management Program
- Two Network Nodes (ZT LN01)
- Network Interface to Network Node cable  
2.13 m (7 ft) long
- Network Node to Network Node cable  
61 cm (2 ft) long
- Network terminators
- Documentation
- Two-year warranty

### Network Transceiver Options

*RS-485 is the standard transceiver configuration. If a transformer-coupled transceiver is required, specify one of the following.*

- |        |                                                        |
|--------|--------------------------------------------------------|
| Opt 01 | Transformer-coupled 78 Kbps twisted-pair transceiver   |
| Opt 02 | Transformer-coupled 1.25 Mbps twisted-pair transceiver |

Example order: **ZT EK01 Opt 02** would be an STD 32 version of the Network Evaluation Kit with a 1.25 Mbps transceiver and transformer coupling

### Prototyping Module Options

- |            |                                                  |
|------------|--------------------------------------------------|
| ZT LN70-NP | Prototyping Module using wirewrap                |
| ZT LN70-P  | Prototyping Module with Speedwire pins installed |

### Software Option

- |           |                                             |
|-----------|---------------------------------------------|
| ZT 97089M | Network Variable (≤ 62) Software for MS-DOS |
|-----------|---------------------------------------------|

All products are shipped FOB San Luis Obispo, CA, USA. OEM discounts are available for quantity purchases. Contact Ziatech for additional information.

Ziatech provides a two-year warranty on its hardware and software products and a 90-day warranty on its disk media. For a copy of the warranty, refer to the *Technical Data Book* Appendix or contact Ziatech.

STD 32 is a registered trademark of Ziatech Corporation. Echelon, LON, and NEURON are registered trademarks of Echelon Corporation. 3150, LONBUILDER, LONTALK, and LONWORKS and NEURON C are trademarks of Echelon Corporation. PC/AT is a registered trademark of International Business Machines, Inc. MS-DOS and Windows are registered trademarks of Microsoft Corporation. Speedwire is a trademark of BICC-VERO.